

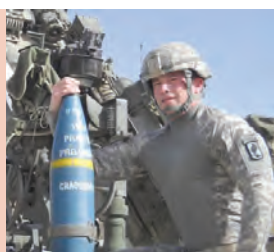


Multicultural Day
A mix of fun, food, fellowship

PHOTO GALLERY
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'Smurf' Round
Reducing collateral damage

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Picatinny People
Senior Executive Service promotion

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THE PICATINNY VOICE



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July 16, 2010



Photo by Erin Usawicz

This year's Multicultural/Employee Day featured a wide range of entertainment and activities. For more pictures, turn to pages 6 and 7.

Employee celebration day hits stride

Since 1992, Picatinny Arsenal has celebrated its diversity with Multicultural/Employee Day, which this year was July 8.

From the start, the day was designated as a way to celebrate the diverse Picatinny workforce. But rather than emphasize individual cultures, a decision was made to combine all festivities into a one-day event for all.

Thus, Multicultural/Employee Day sprung into existence. The celebration began at 9 a.m. with the 5K Run/Walk. It continued with a variety of food, activities and entertainment.

At one point, Dr. Gerardo J. Melendez, the new director of the Armament Research, Development and Engineering Center (ARDEC), took the stage to express his enthusiasm for his new position at Picatinny.

The concept of diversity, he said, should extend to different experiences and views that forge better ideas that advance the overall goal of supporting the warfighter.

To capture the spirit of the celebration, turn to the photo gallery on pages 6-7.



Photo by Erin Usawicz

Lt. Gen. William Phillips, former Picatinny commanding general, applauds retiring ARDEC director Dr. Joseph A. Lannon during the retirement ceremony June 30. Lannon will be remembered for his leadership during which ARDEC won the prestigious Malcolm Baldrige National Quality Award.

ARDEC director says good-bye to Picatinny after years of distinguished federal service

BY AUDRA CALLOWAY
Picatinny Public Affairs

President John Quincy Adams said, "If your actions inspire others to dream more, learn more, do more and become more, you are a leader."

"That's what Joe Lannon has done for all of us," explained Lt. Gen. William Phillips to a standing-room only crowd during a retirement ceremony here June 30 for Dr. Joseph A. Lannon.

Lannon had been the director of the Armament Research, Development and Engineering Center (ARDEC) since 2005 and has retired after almost 44 years of service to the Army and the nation.

Phillips, former Picatinny commanding general, is now the Army's principal military deputy to the assistant secretary of the Army for acquisition, logistics and technology.

"This is a celebration of 44 years of dedicated service to our Soldiers," Phillips said about Lannon's retirement ceremony, adding that Lannon had been a leader among leaders during his time in

the government.

Under Lannon's leadership the organization provided service members with more than 144 materiel and urgent materiel releases of armament. ARDEC also won 21 Army's Greatest Inventions awards, which are selected by Soldiers, as well as a 2007 Malcolm Baldrige National Quality Award.

During his time at ARDEC Lannon also received personal honors as well, which include a 2009 Distinguished Executive Presidential Rank Award, 2004 Meritorious Executive Presidential Rank Award, 2004 Association of U.S. Army Exceptional Service Civilian Awards and a 1988 Firepower Award for Exceptional Service.

"All of this is in recognition of a lifetime of dedicated service to our Army, Soldiers and Families," Phillips said.

Towards the end of the ceremony Phillips had a surprise for Lannon, using the occasion to poke a little fun at Lannon against the backdrop of news reports of massive recalls by the auto company Toyota.

See LANNON, Page 5

ARDEC team works to provide lethal aerial vehicles to Soldiers

BY VELAN MUDALIAR

Materials Engineer

Munitions Engineering and Technology Center

TODAY, THERE ARE VERY FEW MAN-PORTABLE UN-manned aerial vehicles (UAVs) that can effectively identify and neutralize light-armored targets with energetic warheads while minimizing collateral damage.

The lack of such tactical capabilities constrains the warfighter's ability to function in an urban environment where the targets might be in areas where the potential for civilian casualties is relatively high.

The Lethal Unmanned Aerial Systems (L-UAS) program at the Army's Armament Research, Development and Engineering Center's (ARDEC) is the first step toward generating a solution.

"The program weaponizes a UAS platform, which is essentially an aerial prototype or a toy plane, that can autonomously fly into a predetermined target with the help of an onboard GPS receiver," said Daniel Vo, the program's project officer.

The results from ARDEC's weaponization effort include the prototype's internally equipped programmable fuze and warhead.

The fuze is an Electronics Safe/Arm Device (ESAD) and is referred to as "the Universal Smart Fuze" for the "Remote Armament System" (RAS). It can also be armed and disarmed wirelessly by the operator in the ground control station.

"Another key safety feature is that the fuze performs a self check after powering up and wirelessly reports its status back to the operator, which would allow the mission to be aborted if the status report is negative," Vo explained.

For example, the UAV may send back information indicating that it is not flying at near constant speeds, which would confirm that the system is not in normal operating mode, therefore leading to a decision to abort the mission.

The Multi-purpose Warhead can be detonated remotely in either "air burst" mode or on impact. This warhead consists of Multiple Explosively Formed Penetrators (MEFPs) that can defeat light armor targets on direct impact.

The same warhead can be used to defeat soft targets (personnel) by detonating at an appropriate standoff, which is the distance from the warhead to the target at the time of detonation.

"The launcher for the prototype is rail-based and operates on compressed gas," Vo said.

Flight plans in the form of waypoints (reference points that specify latitude, longitude and altitude) can be uploaded into the commercially available autopilot software that integrates the propulsion system with the avionics package, both prior to launch as well as mid-flight.

The prototype is even recoverable as a landing plan can be created by also using waypoints. As an additional failsafe measure, the operator on the ground can remotely take control of the Lethal UAS from the autopilot at any point mid-flight with the assistance of the onboard video camera.

The same camera can also enable the prototype to perform surveillance-oriented missions. However, once a target of opportunity has been identified, it can be neutralized by first remotely arming the warhead and then allowing the prototype to complete the attack as described.

There are other precision armaments in development for urban warfare that could minimize collateral damage in the form of shoulder-fired rounds as well as mortar rounds.

However, using such items can increase the warfighter's exposure to enemy fire. Instead, a lethal UAV would allow Soldiers to engage the same type of target without requiring line-of-sight or having a standardized flight trajectory that can be traced back to the user's origin.

Two successful tests of the ARDEC developed system were conducted in February 2010 at Dugway Proving Ground in Utah. The targets were stationary vehicles. The flights for both tests were completely autonomous



Members of the Lethal UAS Team pose for a photo after successfully completing a live-fire system demonstration at Dugway Proving Ground in Utah. The team includes personnel from ARDEC, Dugway Proving Ground, Latitude Engineering and RCAT Systems. (Courtesy photo)

and the ground operator did not have to manually take control at any point.

"These positive results were obtained within a turn-around time of one year since the project's start," said Vo.

He attributed the quick pace of the program to the fact that both the Universal Smart Fuze and Multi-purpose Warhead (including the internal explosive, which was specifically chosen to produce higher blast effects) were developed in-house at ARDEC facilities at Picatinny Arsenal.

Vo also said that the provider of the UAS platform, Latitude Engineering, LLC of Tucson, Ariz., is a small company that was very attentive to working as a team with ARDEC.

The UAS platform included the airframe, avionics package, propulsion system and launcher.

Future plans for the Lethal UAS program include miniaturizing the current platform so that it can be fired out of an 84-mm shoulder-fired tube and eventually out of a 60-mm mortar tube. One goal is to make the system "man-portable".

"This means reducing the total weight of the system to less than ten pounds," Vo said. "ARDEC is confident of being able to reach this goal," he added.

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THE PICATINNY VOICE



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Printed on recycled paper

Experience earns Machak senior executive status

BY MARK SANCHEZ

Special to The Picatinny Voice

BARBARA MACHAK HAS ALWAYS prided herself on her willingness to accept challenges.

Now responsible for more than 600 people, she may have accepted her greatest challenge thus far.

In June, the Secretary of the Army appointed Machak to the Senior Executive Service, assigning her to the Tier 1 position of Executive Director, Enterprise and Systems Integration Center, U.S. Army Armament, Research, Development and Engineering Center (ARDEC).

She had previously served under Dr. Joseph A. Lannon, the former director of ARDEC, as the organization's Associate Technical Director for System Concepts and Technology.

In that position she was responsible for creating a balanced portfolio of technologies including smart munitions, fire control, guidance and control, acoustic sensors, and power and energy systems.

Throughout her career, Machak has demonstrated an inquisitive nature and a can-do attitude. "I have a curious mind," she said.

"I like to know how things work. I like to ask why. I never said no to any job that anyone asked me to do."

Machak began her career with the Army in 1981 and has held a variety of positions within ARDEC. She has served as Projects Officer both for the Regenerative Liquid Propellant Gun for the Advanced Field Artillery System and for Solid Propellant Armaments for the Crusader 155mm Howitzer.

FORGING NEW RELATIONS

As Chief of the Crusader and Future Armaments Team, she was instrumental in forging a new type of working relationship between government and industry in armament development.

"I came into the Army and thinking I'd just get experience and then move on to industry.

"But what happened was that as my career developed I found that I loved my work. I came to believe deeply in what we were doing here."

In her new position, Machak will be responsible for strategic planning, business development and management of knowledge and human capital.

She will also be responsible for maintaining and growing ARDEC's core competencies in program management, system engineering, and logistics research and engineering.

Machak will be overseeing the Joint Service Small Arms Program and the Army Fuze Management Office, while coordinating the Army's armaments enterprise efforts with numerous Program Managers, Program Executive Offices, Defense Services, academia and industry.



The Secretary of the Army appointed Barbara Machak to the Senior Executive Service in June. She has held a variety of assignments at Picatinny Arsenal.

"I believe that my promotion has been a recognition not only of my previous accomplishments but--even more--of what I have yet to offer."

With her new responsibilities, Machak will have multiple opportunities to serve Picatinny in a variety of ways. However, to younger employees, her most significant contribution might be the wealth of knowledge that she has acquired over her 29 years of experience.

GUIDING YOUNG EMPLOYEES

Machak is conscious of the guidance needed by the younger staff, and feels it's her duty to help them and to ensure that they continue to offer the best possible service to the Army.

"I see myself as having a responsibility to impart knowledge to the younger workforce," she says. "They have to understand how we do things, and they need to do them better."

Machak is passionate about the future of Picatinny. She wants employees not only to serve the Army well, but also to take full advantage of the opportunities the Army provides.

"Learn your technical expertise," she counseled. "Don't be afraid to move around and look for opportunities. Take advantage of educational opportunities."

"Be aware of the history that you are a part of. What we do is so important.

We're saving lives. And this all goes by in a blink, so have fun. Go for your passion."

For her, effective interaction with people, both subordinates and higher management, is integral to creating a vibrant and productive technical environment.

"You have to find out what people are comfortable with. How do they communicate best? Face-to-face? By e-mail? What motivates them?"

"What are the best ways to recognize your people's efforts, their achievements? And what are the best ways to get your own message across, and to make sure that it's being understood correctly?"

Machak maintains that the key to human interaction is true listening.

"You have to listen very well. Listen, not judge. I think I treat people fairly and honestly. I'm up front with them. I ask for and value opinions that are different from my own."

"Someone once told me that there are three guarantees in life: death, taxes and change," Machak said.

In a world where e-mail is predominant, Machak smiles as she recalls typing memos on typewriters and sending them through traditional mail.

CONSTANT LEARNING

To adjust to the various changes that time inevitably brings, she is in a perpetually learning state.

"I've learned from subordinates, from peers, from formal education, and from bosses. I've learned from mistakes. I gather information from all over—I read as much as I can."

After gleaning all relevant information, Machak constantly reminds herself to think about the big picture in decision-making.

"You have to consider what's good for the Army, the nation, the taxpayer. You can't just think about what's good for your little area."

"You need to be always aware of the people you work with--your subordinates, your peers, and higher management: it's the team. When we get together as a team, I believe we can do anything."

"You work really hard as an individual, but we're family here, and it's the effort of the whole team that gets results."

EXTERNAL TEAMWORK

Machak's "team" has seen remarkable results. For example, under her leadership more than 90 percent of the ARDEC technology base portfolio was leveraged with other groups in the Research, Development, and Engineering Command, the Department of Defense, the Department of Energy, and other agencies.

In addition, the success rate of technology transition to Program Executive Offices and Program Managers rose to more than 80 percent.

Earlier in Machak's career, in her position as senior engineer for Project Manager Nuclear Munitions, she helped coordinate the approval process for and execution of a major nuclear weapons reduction.

BATTLEFIELD TESTING

She is particularly proud of fielding the first-ever armed, tele-robotic system in a combat zone for evaluation.

"One of the systems, Smitty, named after Sgt. 1st Class Scott Smith, one of our fallen Explosive Ordnance Disposal (EOD) Soldiers, will be placed in the Army's National Infantry Museum in Columbus, Georgia," she notes.

Yet, Machak is hesitant to take sole credit. She cites Smith and Sgt. 1st Class Dave Platt as key contributors to the development of the system.

Of her new job, Machak says: "I am absolutely thrilled and excited to be given this opportunity. That's what I look at it as: an opportunity—and a challenge."

Machak plans to make the most of this challenge.

"I have a driving interest, and it has to do with validating what we're doing. We need to find out what we're doing well and not so well."

"If something we're doing has no value, or has little value, we're going to change that. We need to continuously improve what we do for ARDEC."

Armed Forces Vacation Club: Sometimes things that sound too good to be true are really just what is advertised!

This Army-sanctioned vacation club allows individuals to find resort accommodations at the bargain basement price of only \$349 per week if booked online and \$369 per week if you use the 800 telephone reservation number.

This is a space-available program, with resorts in all areas of the United States. Visit the website www.afvclub.com to scout locations.

Call (800) 724-9988 to make a reservation. Remember to give the Picatinny Arsenal code of #132. This program is available for military, civilians and contractors.

Billy Elliot on Broadway, Sept. 22: Cost is \$135 per person and includes orchestra seating ticket and charter bus transportation to see this Tony Award winning musical at the Imperial Theatre.

The music, by Elton John, enhances this funny, heart-warming and feel-good celebration of one young boy's dream in a gripping tale of triumph over adversity.

This powerful new musical is the story of a boy who discovers he has a special talent for dancing, while the boys all around him are more interested in boxing.

Bus departs Picatinny at 9:45 a.m. to head to "The Big Apple" for the 2 p.m. show. Participants will have approximately 2 1/2 hours of free time to wander the New York City before the show. Bus returns to Picatinny around 6:30 p.m.

Summer tickets are now available! The following tickets are ready for purchase at the ITR office:

Community Recreation Branch



Frog Falls Waterpark

Six Flags Great Adventure, Jackson, N.J.: One-day amusement park and safari tickets for \$28, three-park season passes for \$120 (includes Hurricane Harbor), two-park season passes for \$90, meal vouchers for \$11 and parking passes for \$12.

Hershey Park, Hershey, N.J.: Adult one-day passes cost \$40. Juniors ages 3-8 and seniors over 55 years of age are \$28.50.

These tickets also let you use the preview plan to maximize your visit. The preview plan allows participants to "preview" the park the evening prior to their visit. All single or multi-day tickets qualify for this deal.

Present your ticket at the gate after 7:30 p.m. and enjoy all of the rides and shows all evening long.

Bronx Zoo, Bronx, N.Y.: Pay-one-price tickets available. Cost is \$22 for adults and \$16 for children 3-12.

This ticket is a one-price ticket that gives access to the zoo, as well as the Congo Gorilla Forest,

Children's Zoo, Butterfly Garden, Monorail, Zucker Bug Carousel and the zoo shuttle.

Busch Gardens, Williamsburg, Va.: Summer special for all military and DOD customers. The cost of the ticket is now only \$41 per person. Same pricing for adults and children.

Morey's Piers, Wildwood, N.J.: Combo Water Park and Amusement Pier.

Ticket is perforated; can use water park one day and amusement pier another day or choose to do both on the same day. Cost is \$40 for adults and \$32 for children less than 48" tall.

Sesame Place - Langhorne, PA - One day ticket - \$49 (everyone 2 and older pay the same price). Enjoy the fun of Elmo and the Sesame Place characters!

Storm King Art Center in Orange County, NY and then lunch at Gasho Hibachi Steakhouse

Date: Saturday, September 11
Time: Depart Arsenal at 9 AM - back at Picatinny around 5 PM
Cost: \$53/person

Located just off Interstate 87 in Orange County, NY, the Storm King Art Center is a 500 acre outdoor Sculpture Garden. Enjoy a docent guided tour and then free time to wander on your own and visit the museum and

bookshop. We depart and go for lunch at the Gasho of Japan, Hibachi Steakhouse. All this and charter bus transportation for only \$53/person.

Call the "Take Off" Center at 973.724.4014 or email pienkos@us.army.mil if you are interested. We need at least 50 people who wish to attend in order to book this trip. Call right away! First ones on the interest list get first choice at buying the tickets if we confirm the trip.

Army vs. Rutgers Football

Saturday, 16 OCT at the NEW Giants Stadium at the Meadowlands
Lower Level seats: \$65

Upper Level seats: \$55

No transportation is included. Actual ticket location is not available ahead of time.

Tickets must be paid for when you make your reservation. We will then order from the Army ticket office and the tickets will be available for pick up around 1 OCT. You will be em-ailed when the tickets arrive.

You can stop by the "Take Off" Center in Bldg 34 from M-F, 0730 to 1530 to order your tickets. We accept cash, check, MasterCard or Visa. You can call in and use your credit card over the phone to reserve also. 973.724.4014.

DEADLINE:13 August.



Photo by Audra Calloway

Air Force Col. Kim Brooks passes the charter for Project Director, Joint Products, to Brig. Gen. Jonathan Maddux before he in turn passes it on to Air Force Col. Victor Rodriguez.

First female Air Force project director at Picatinny moves on

BY ERIC KOWAL

Picatinny Public Affairs

The project director for Joint Projects changed hands during an informal ceremony here July 12 as Air Force Col. Kim Brooks relinquished command to Air Force Col. Victor Rodriguez.

Brooks served as the project director for the fairly new organization since Oct. 1, 2009, but also served as the Deputy Executive Director for Conventional Ammunition since January 2008.

As the project director, Brooks was responsible for the acquisition planning and management of the Air Force and Navy general purpose bomb, the penetrator bomb, and bomb fuzing and com-

ponents to include all training bombs.

She was also responsible for the Navy's gun, 76mm and 57mm tactical and training ammunition programs and was held accountable for the execution of Air Force and Navy resources exceeding 1.6 billion dollars.

Brooks was not only the first Air Force project director here, but also the first female project director to hold that position at Picatinny.

She is moving on to Arnold Air Force Base, Tenn., to serve as the 704 Maintenance Group Commander.

Rodriguez is coming from Kirtland Air Force Base, N.M., where he served as Chief, Nuclear Logistics, Defense Threat Reduction Agency.

Spacious new outdoor recreation center opens

BY MARK SANCHEZ

Special to the Picatinny Voice

Hans Karlsen wants to have the best facility of its kind in the Army. And he believes he might have just achieved that goal.

On June 29, Karlsen, the Director of Outdoor Recreation, cut the ceremonial ribbon unveiling the new home for the Picatinny Outdoor Recreation Department: the recently-renovated old firehouse now called The Outdoor Adventure Recreation Center.

For Karlsen, this move, which took place on June 14, finally allowed the department to use the existing equipment in a more spacious and clean environment as well as introduce an abundance of new gear.

At the old Outdoor Recreation Center, located in the Forge, space was limited. The department had crammed its equipment into its allotted area, which was about half the size of its previous residence. With this move to the decidedly more capacious building, the Outdoor Recreation Department is "coming out of its closet," Karlsen joked.

The building's renovation and

the new equipment were made possible by former Picatinny Commanding General Brig. Gen. William N. Phillips.

Before he departed, Phillips allotted \$400,000 to the renovation of the firehouse. It needed a new roof and fire suppression system, which ultimately cost \$125,000 and \$100,000, respectively. There were additional restorations, including the entire downstairs of the building being made handicap accessible. The only thing left to decide was which department would be awarded the building.

"The Police Department wanted it," said Karlsen. The Police Department was eventually offered a brand new building a few years from now and the Outdoor Recreation Department was presented with the old firehouse.

With the remaining \$106,000 that Phillips had earmarked, Karlsen and his department bought new equipment and gear for the Outdoor Adventure Recreation Center.

"No one else has anything like it," Karlsen said, alluding to the department's new home. "My goal is to have the number one recreation center in the Army, and I think that's what we have."

Countless new gadgets and tools will assist military personnel and their families, as the Outdoor Recreation Center's mission statement articulates, "in healthful and vigorous outdoor recreational activities".

The department has taken a definite technological step up. The center will now include Audio-visual flat screen TVs with surround sound and Direct TV programs that show various outdoor activities, like hunting and fishing, displayed on the screen.

"They're either instructional or meant to pump you up," Karlsen added.

Additionally, the area includes Wi-Fi separate from the military Internet.

Superfeet, a top-shelf, premium foot innersole, also is new to the Outdoor Recreation Department.

The innersoles reduce stress on muscles and ligaments, in addition to decreasing the amount



Photo by Erin Usawicz

Hans Karlsen, director of outdoor recreation, shows off new equipment for the Outdoor Adventure Recreation Center. Behind Karlsen, from left, Installation and Garrison Command Sgt. Maj. Scott Koroll, Commanding General Brig. Gen. Jonathan Maddux, and Garrison Commander Lt. Col. Herb Koehler.

of blisters and bunions associated with exercising.

The Outdoor Adventure Recreation Center offers an even greater selection of camping gear, mountain bikes, surfboards, and even GPS units.

In addition to all these innovations and advancements, the

Outdoor Recreation Department continues to work on a second paintball field and a three-dimensional outdoor archery range to be available sometime in the future.

"We're a small installation but we're already the best in the Army," said Karlsen.

Lannon's retirement caps string of career achievements

Continued from Page 1

A strong proponent of Lean Six Sigma, Lannon asked all his top-level staff to read "The Toyota Way" to learn about Toyota's business practices, Phillips said.

"Things happened in Toyota just recently, so he was very quick to change...so now it's the Ford Way," Phillips joked, holding up a self-made book titled "The Ford Way."

Phillips was serious, however, when he told the crowd that that service members in harm's way have been saved by the work of Lannon and the Picatinny team.

"They will probably never hear or know the words Dr. Joe Lannon, or ever know him, but they will have survived in combat because of the hard work ... that Joe has done for our nation," Phillips said.

On Lannon's last day at ARDEC he sent employees an e-mail thanking them for supporting him as the ARDEC director.

"I would like to thank each and everyone for your great support to me during my tenure as Director, ARDEC," he wrote. "You are part of a great organization that is on its way to become an even greater organization. You have a strong leadership team that you need to support as you have always done to me."

"You have provided our warfighters many weapons systems and components that have saved lives. Remember what we do is always centered around our customer, the war fighter and the customer is always right.

"Remember the ARDEC values, always be committed to continuous improvement and enjoy your job. I will always remember each and every one of you and will pray for each of you to be successful in your lives."

Multicultural/Employee Day continues tradition

Activities and entertainment during the day of celebration included The Way Outs (featuring Picatinny employee Tim Rybarski), a Hawaiian Luau Ensemble, as well as The Niall O’Leary Irish Dance Troupe.

Photography by Todd Mozes and Erin Usawicz



Photo by Todd Mozes



Photo by Todd Mozes



Photo by Erin Usawicz



Photo by Erin Usawicz



Photo by Todd Mozes



Photo by Todd Mozes



Photo by Todd Mozes



Photo by Erin Usawicz



Photo by Todd Mozes



Photo by Erin Usawicz



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Photo by Todd Mozes



Photo by Erin Usawicz



Photo by Erin Usawicz

'Smurf' round aims to reduce collateral damage

STAFF SGT. BRUCE COBBELDICK

WARDAK PROVINCE, Afghanistan -- While some commands severely restrict artillery fires, one task force in Afghanistan has taken active steps to reduce collateral damage by developing an alternative method.

Task Force King of the 173rd Airborne Brigade Combat Team came up with an alternative for indirect fire missions using solely high-explosive TNT.

Soldiers of the 4th Battalion, 319th Airborne Field Artillery Regiment, crafted a way to fire non-exploding training rounds in the adjustment phase, and then switch to a lethal round in the fire-for-effect phase.

Using this method, fewer live rounds are fired, reducing collateral damage and civilian casualties.

"Our rules of engagement have been a challenge, because our enemy knows when we use artillery in a conventional fire fight there remains a very real possibility of unintended collateral damage," said Command Sgt. Maj. Dennis Woods.

"In our efforts to avoid that, commanders have previously been far less inclined to use artillery. Insurgents are not stupid. This enemy has been using our ROE to avoid our fire support advantage... until now." They brought artillery back into the fight in the east-central province of Wardak.

The less lethal training round in use is the M804A1 also known as the "smurf" round due to its blue color. It's a ballistic



Sgt. 1st Class Rodney Graves

Staff Sgt. Michael Kain and Pvt. William Fiel of Battery A, 4th Squadron, 319th Airborne Field Artillery Regiment, 173rd Airborne Brigade Combat Team, display the round used for civilian casualty reduction.

match for a live high explosive artillery round, meaning the round will have the same effects while in flight from the tube to the target.

The difference is in the impact effects. "The 173rd ABCT gives up nothing in terms of effectiveness," Woods said.

"The fire-for-effect round is exactly where it would be had we fired all explosive artillery rounds. This new approach that we are using here is more sensitive to the environmental impact issues along with the cultural issues that affect Af-

ghanistan citizens.

Woods said that because Afghanistan is an agrarian society, when high explosives are used, they contaminate the soil. When chemicals from TNT, RDX, and HMX erode into the fields, crop yields can be harmed, so using less high-explosive rounds is good for Afghanistan's long-term future, as well as posing a far less likelihood for collateral damage.

"The 173rd ABCT is aware how collateral damage separates us from the people. Since the people are the real objective,

within a counterinsurgency war, our ability to increase public safety is the moral choice and the strategic choice that best delivers our vision."

By reducing civilian deaths and collateral damage, the Soldiers are meeting the objectives that support the counterinsurgency or COIN doctrine.

"The insurgents are choosing to fight among the people, employing them as human shields," Woods said, adding that insurgents also try to avoid artillery by hiding near protected structures.

"This technique allows us to pursue the enemy despite his use of human shields. We can fire closer to protected structures with less potential for collateral damage," he said.

Woods attributed the new technique to his Soldiers thinking outside the box to tailor fire effects and deliver "focused lethality."

Every 155mm M777A2 cannon crew in the 4-319th AFAR has the 'smurf' round on location.

"There aren't many armies that would go to this extent to increase public safety and reduce collateral damage like the 173rd Airborne is doing day in and day out," Woods said.

A Soldier commented from Sayed Abad: "When the blue training round arrived on location, I asked 'Why they are issuing us less lethal rounds?' After learning their purpose in reducing collateral damage, I then asked 'Why we haven't been doing this for the last nine years?'"

RDECOM launches alliance for network science

BY JOSEPH FERRARE, RDECOM PUBLIC AFFAIRS

A new Army-led alliance launched this week to better understand how Soldiers can use various networks to prevent or dominate conflict.

Maj. Gen. Nick Justice, commander of the U.S. Army Research, Development and Engineering Command (RDECOM), delivered the keynote at the formal launch of the Network Science Collaborative Technology Alliance June 23 in Cambridge, Mass.

The NSCTA program unites government, academic institutions and industry to do research that cuts across academic and industrial boundaries so the Army can gain a fundamental understanding of common underlying science among social-cognitive, information and communications networks.

The goal is to develop a scientific foundation for modeling, designing and predicting the behavior of very large networks of humans interacting with each other.

The RDECOM Cooperative Agreement Manager is Dr. Alexander Kott, the Network Science Division chief at the Army Research Laboratory.

He will form and lead the government Research Management Board with representatives from RDECOM's centers and laboratories, the other military services and other government agencies.

"The Army is moving rapidly and ever deeper into a network-centric world. So much now depends on how Warfighters and sensors and weapons communicate information through mobile, self-forming, rapidly-

changing networks," Kott said. "Here, we see the same three intertwined types of networks: social-cognitive (Warfighters), battlefield information, and communication nets."

Unlike some research efforts, the need for this research became apparent after success rather than failure, Justice said.

"When we went into Iraq in 2003 none of our military communications systems worked. Why? Because they were rigid. They did not move. They were not designed to move as fast as we needed them to.

"The only thing we had was a computer on all our combat platforms networked together sharing a tiny satellite connection; 1,100 computers sharing five kilobits of bandwidth per second.

"That is not a lot of bandwidth—you weren't going to do streaming video on that network. But what it did was revolutionize the way we fight. Believe it or not, 1,100 combat platforms sharing 5 kilobits per second completely turned us upside down," Justice said.

That network connection allowed the Army to overcome restraints in place for thousands of years, he added.

"The march to Baghdad goes down in history as an unprecedented military maneuver because the Army became self-correcting," Justice explained.

"We did not have to play football. What I mean by that is the Army fights and then stops. This goes all the way back to the Roman legions.

"You stop at night, get everybody all huddled together

to figure things out: where are you, let me find you on a map, resynchronize your orders, adjust what you need to do, and get ready to get up in the morning and start all over again.

"We didn't play football for 22 days. We did not stop and huddle. We played soccer. It was run and gun. It revolutionized what we do."

More to the point, it started a revolution, he said.

"We've been struggling now for most of a decade to figure out how to better understand what we're doing. We've got megabits of bandwidth now, but it's only (a little bit) better. Why? Information overload."

The NSCTA hopes to help the Army overcome that problem and many others, but it is a new field, Kott said.

"It was only a few years ago that scientists realized that networks of all kinds--biological, social, computer--are in a unique class of creatures, which live their own mysterious lives," said Kott.

"They evolve, change, behave in little-known ways and all this is very important to understand and to study."

The network alliance is made up of centers for three distinct areas and an interdisciplinary center. The Information Networks Academic Research Center is led by the University of Illinois-Urbana Champaign, the Communications Networks Academic Research Center is led by Penn State University, the Social-Cognitive Networks Research Center is led by Rensselaer Polytechnic Institute, and the Interdisciplinary Research Center is led by Raytheon BBN Technologies.

Looking Back ... At Picatinny



BY PATRICK J. OWENS
ARDEC Historian

When this writer attended school back in the dark ages, brutal pedagogues forced students to write essays. Often the first one of the school year was on the theme, "How I Spent My Summer Vacation." If the troops in the accompanying July 1947 photo had to write on this subject, they could describe the thrilling July day when they travelled to Picatinny Arsenal and listened to lectures.

At the podium is Col. William E. Larned, commander of Picatinny. In the chairs are more than 200 Reserve Officer Training Corps cadets whose branch of choice was Ordnance. Their normal duty station during the summer was Aberdeen Proving Ground, Md., but they had the

privilege of spending one exciting day at Picatinny. After the welcome from Larned, they viewed a slide show on the arsenal, attended a firing display at the pyrotechnic range, and toured the installation. Next came the highpoint of the day, lunch in the cafeteria in the basement of building 151.

Filling out the afternoon were demonstrations of several items and processes for assembling fuzes for recoilless rifle ammunition and loading rocket warheads.

Recoilless rifles had been around for just a few years in 1947, and rockets were still exotic items.

The cadets also viewed complete round assembly methods and the manufacture and loading of propellant charges. Aberdeen must have seemed dull when they returned.

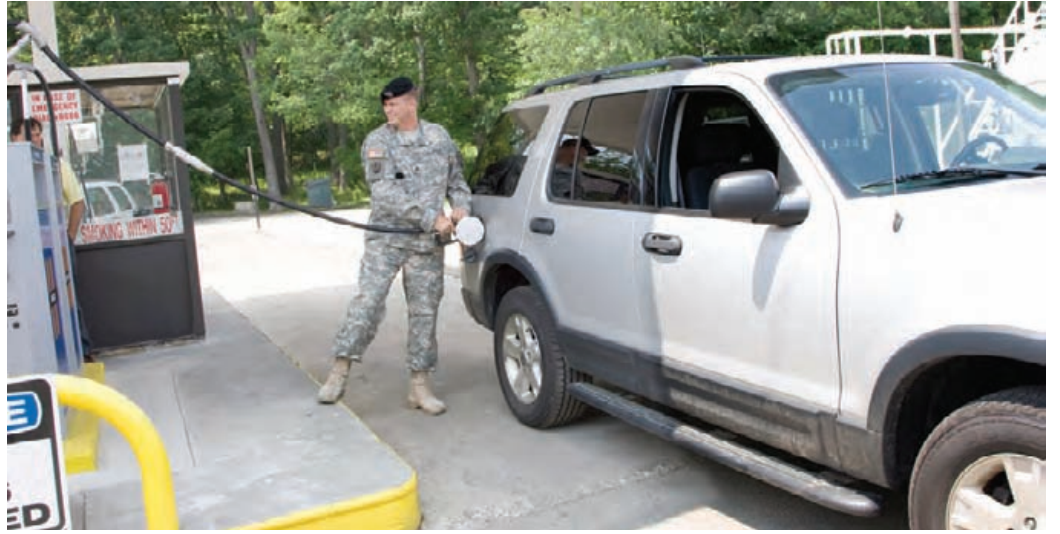


Photo by Erin Usawicz

Installation and Garrison Command Sgt. Maj. Scott Koroll tests the pump at the new gas station after the recent ribbon-cutting ceremony.

New garrison gas station opens

BY MARK SANCHEZ
Special to The Picatinny Voice

The results of about three months of hard work and close communication came to fruition on July 7, as Garrison Commander Lt. Col. Herb Koehler cut the ceremonial ribbon on the new gas station, located on the corner of Third Street and Farley Ave.

Use of the new gas station is intended only for Department of Defense and General Services Administration vehicles.

Luis Ortiz, Director of Logistics, is particularly thrilled about the new opening, since it was not supposed to be built until next year.

"Because of the interaction between the U.S. Army and the Garrison Command, Defense Logistics Agency, and the Corps of Engineers, this project was moved to a year earlier," he said.

"The cooperation of everyone working collectively to make this happen has put Picatinny in a much better position."

While there is now a more gas-accessible station, Ortiz also stated that with all repairs the installation is now environmentally safer.

"This has really improved the safety environment ... because of the environmental hazards we had in the past. From the environmental aspect, this has been a great event."

Work began on the station on April 15. Es-

entially, the entire station and all its parts had to be repaired, made, or cleaned. The drain pipes had to be repainted, the electrically wiring redone, while the gas tanks had to be refurbished and dispensers had to be manufactured.

Additionally, a catwalk was installed. An Emergency Eyewash was also constructed for further safety. In total, the new gas station cost about \$300,000.

The station is spotless, and a sign advising users to "help keep this place clean" indicates that management does not want the months of cleaning and fixing to go to waste.

"It was a milestone," remarked Ortiz. "We maximized every resource that we had. We are proud to say that Picatinny now has one of the best facilities in the northeast region."

The first to test out the new facility was Command Sgt. Maj. Scott Koroll, who pumped gas into his Ford Explorer shortly after the ribbon cutting. The station was scheduled to open July 12.

Ortiz has felt a need for the new station for five years. Now that it is finally completed, he feels happy with the end result. "Everything is good to go, everything is great."

Ortiz attributes the advance opening of the gas station to hard work and communication between the different branches and installations that were recognized during the recent ceremony marking the opening of the facility.

Second annual 'Take a Soldier Fishing' project for veterans seeks support

A free fishing trip for veterans of Operation Enduring Freedom or Operation Iraqi Freedom is scheduled for Oct. 10 off Montauk Point.

The second annual fishing trip, which will be from 8 a.m. to 4 p.m., is hosted by the organization, "Take a Soldier Fishing."

A number of recreational fishing boats have committed to providing a free day of fishing, after which will there will be a cocktail party for the veterans.

To provide a more enjoyable experience for the veterans, the plan is to limit the boats to three Soldiers each, plus a captain and possible a deck hand on some boats.

October is considered the best month to fish off Montauk for striped bass, bluefish and false albacore.

Take a Soldier fishing is a non-profit corporation and a subsidiary of Combat Warrior Crisis Network.

More information on the network can be obtained by visiting the Web site, www.combatwarriorcrisisnetwork.org or www.takeasoldierfishing.org.

For specific information about the upcoming trip or to sign up, contact John Venneck at 914-924-2835 or send an e-mail to johnv@takingasoldierfishing.com.

All fishing expenses will be paid by private donations and Take a Soldier Fishing.



Photo by Erin Usawicz

Jeffrey Hadfield, a meat cutter at the commissary, receives a certificate for merchandising excellence from Russell A. Strich Jr., field sales consultant for the Northeast Service Center of Tyson Foods Inc. The certificate also comes with \$500 to donate to a charity. "I chose the Wounded Warrior Fund as I thought this was a more appropriate charity, being that we are a military establishment," Hadfield said. "This is an ongoing competition. The criteria changes for each contest and the awards vary." The ARDEC commissary was one of nine regional commissaries to win the contest.

Educators' tour underscores Arsenal appeal to students

BY MARK SANCHEZ
Special to The Picatinny Voice

As an installation involved in advanced research and technical work, Picatinny Arsenal is an ideal environment for students interested in the physical sciences.

On June 29, approximately thirty educators arrived at the Arsenal to take a tour of the base and receive briefings on various activities on the installation.

The purpose of the visit was to educate the teachers on the advantages of working with the Army.

The Department of Defense offers a number of highly technical career opportunities, and by presenting this information to the teachers, the educators might then echo this sentiment to their students.

The group, composed mostly of teachers, some business developers, and a few Northern New Jersey education recruiters, arrived at its first destination at the Lindner Conference Center.

The educators were briefed on the activities of the Program Executive Office (PEO) Ammo; Armament Research, Development and Engineering Center (ARDEC); and the Science, Technology, Engineering and Mathematics (STEM) Program.

Speaking for PEO Ammo, Project Officer Vince Matrisciano conveyed his program's mission and goals. He detailed how the program manufactured munitions and seeks new innovations to aid Soldiers.

"At the end of the day, we're meeting joint warfighters needs," he added. "We produce a lot of different products, we have a lot of different abilities, and it can't be done without engineers."

As Matrisciano explained the activities of his program and the advantages to working with the Department of Defense, he continually reiterated that students are the future. There is a need, he said, for future engineers, especially within PEO Ammo.

After PEO Ammo's presentation, Henry Rand, Acting

Deputy Director of ARDEC, presented an overview of ARDEC. He detailed the installation's mission and how it has become a global leader in arms and technological solutions.

He also spoke of a sort of "youth movement" occurring in ARDEC. The average worker age is now about 42. And he's looking to recruit more students and continue to keep his staff young and bright. While he acknowledged the educators' potential role as recruiters, he also underscored the importance of their main job: to teach.

"The more you teach (students), the more they learn, the more they can help us."

Edward Petersen, the Program Manager of the Department of Defense Ordnance Technology Consortium STEM Education Office, briefed the educators about STEM. He told the group the program values education heavily, which is the key to the future. His staff wants students to pass state tests and eventually join the workforce to protect the



Photo by Erin Usawicz

Picatinny employee Lewis Campanile delivers a presentation to a group of educators during a tour June 29 designed to promote science and technical education to students.

United States. At STEM, he noted, workers are trying to "ensure preparedness through education".

After the presentations, the educators had time to reflect on the information.

"I think it was excellent," said Art Lobdell of the Boy Scouts of America, a rare non-teacher on the tour. "I had heard about the programs and I wanted to find

out about possible partnerships with the Boy Scouts."

From the Lindner Conference Center, the educators visited a number of other areas of the arsenal, including the Prototype Integration Facility, the Remote Armament Branch, the Gaming, Interactive Technology and Multimedia building, as well as the Emergency Operations Center.



Photo by Vince Little

Staff Sgt. Cesar Diaz fires an 84 mm tactical round out of an AT4 Confined Space launcher during the Maneuver Battle Lab experiment at Duke Range on Fort Benning, Ga.

Army tests rounds for shoulder-launched weapon

BY VINCE LITTLE
The Bayonet, Fort Benning

FORT BENNING, Ga. -- The Maneuver Battle Lab spent four days evaluating a pair of sub-caliber training rounds for a shoulder-launched weapon used to engage armored vehicles from confined positions to identify which one best prepares Soldiers to fire the real thing.

Fourteen Soldiers fired 9 and 20mm rounds in the AT4 Confined Space launcher and compared their effectiveness and suitability to the 84mm live version.

The AT4CS is a lightweight, disposable weapon designed for single use, said Steve Howard, a project officer for the Maneuver Battle Lab's Soldier team.

"It is safely and effectively fired from confined space to defeat various military targets, including light-armored vehicles, at both near and ex-

tended ranges," he said. "(But) currently, there is not a sub-caliber training round for the AT4CS."

A standard AT4 produces a large back blast. The CS model, however, features a counter mass that could allow troops to fire safely and effectively within buildings in an urban environment.

Justin Strayer, a close combat systems analyst for the Soldier Requirements Division, said the AT4CS can be fired from a 12-by-15-foot room that has a 7-foot ceiling—without triggering any blast overpressure or back-blast hazards.

The Directorate of Training and Doctrine established the requirement for a sub-caliber training round to replicate the actual system's launch effects and trajectory when fired, Howard said.

"This could provide Soldiers with a more realistic training system," Strayer said. The 9mm training round even includes a back-blast charge for added simulation to the live weapon.



Sharon Debowski shows children a scene from a storybook.

Storyteller charms children

Submitted by Child, Youth and School Services

Recently, more than 50 children enrolled in Child, Youth, and School Services (CYSS) were treated to a visit from acclaimed storyteller Sharon Debowski.

In support of the Meet the Author events regularly held by CYSS, Debowski held three separate readings for Picatinny Arsenal's Kindergarten, Pre-Kindergarten I, and Pre-Kindergarten II classes.

Much to their delight, Debowski read her latest book, The Snowman, the Owl, and the Groundhog, a rhyming tale about a snowman's quest to prolong winter. The classes loved Debowski's outfit, too: she was dressed entertainingly as a snow woman.

Each event was not simply a reading, but also an educational presentation designed to inspire children to read and reach their goals. To illustrate the ability to make dreams a reality, she explained how her book started from a bedtime story she created for her son.

"One day, while telling a tale before bed, I just started to rhyme," she explained. Debowski used this inspiration to build her book's foundation.

Children also explored the creative, collaborative nature of the publishing process. Classes compared the initial, unaltered slides painted by the book's artist with the final illustrations.

Debowski's visit reinforced the vital lesson that at the heart of any creation are inspiration, passion, and cooperation.